



PERFECTING THE PRINTING INDUSTRY

Sigma-Nip® sensor system positioned on a roller set

Sigma-Nip® — a real-time nip analysis system used to ascertain parallelism, loading issues and printing blanket height uniformity.

Sigma-Nip® presents a revolution in quality control. For the first time ever technicians are able to accurately, efficiently and economically measure roller profiles and alignment condition. Sigma-Nip® consists of a series of thin-film resistive ink pressure transducers on a carrier sheet. As this carrier sheet is loaded in between your rollers the Windows-based software assimilates the readings into easily interpretable graphical images — all in real time.

What people are saying about Sigma-Nip® ...

"Sigma-Nip® is an extremely helpful tool for troubleshooting in printing presses and has saved my colleagues and I significant amounts of time. It allows us to assess what is happening where the actual printing takes place and quickly get to the source of the problem. This is a new tool for us and the industry, but I foresee more and more printers starting to use this system as people begin to see its advantages."

ABITIBI CONSOLIDATED, Don Jordan

"We are still learning how the Sigma-Nip® system works and how to correlate the readings to product performance. However, the tool is easy to use, highly repeatable and I believe an excellent analysis tool that will help us improve product quality in the long run."

CYTEC USA, Tommy Vanhome



Nip data is easily interpreted on your laptop

A REVOLUTION IN QUALITY CONTROL

WHAT IS SIGMA-NIP®

Sigma-Nip® consists of a series of sensor elements that are placed in between two contacting rollers. Immediately upon the application of force, the sensor reveals the precise level of pressure **AND** where the pressure is occurring – allowing you instantaneously determine whether your rollers are aligned properly and are squeezing together sufficiently.

DESIGNED FOR PRODUCTIVITY

Sigma-Nip® comes complete with everything you need to quickly and accurately take nip impressions. Sigma-Nip's software is so intuitive and user friendly that within minutes even an inexperienced user will benefit from its powerful reports.

Sigma-Nip® is designed with the intention of being used during routine maintenance or setup and is quickly applied across the roller surface by just one person. The system is modular and portable and quickly connects to the USB port on any standard Windows laptop.

WHY?

Proper roller alignment and pressure level are critical for both print clarity and web control. An evenly loaded roller set is much less likely to cause costly web breaks and sheet "walking", wrinkles, or fold-overs. Simply by virtue of routine tests, Sigma-Nip allows the user to greatly extend blanket life. Uneven blanket wear, and permanent, compression or "memory set" maximizes on-press life.

ANCIENT HISTORY

Sigma-Nip® is a real-time system. What that means is that your roller adjustments can be made **WHILE** the sensor is actually in the closed (non-rotating) nip. This allows for unprecedented flexibility and speed, previously unachievable with the traditional ink blotch technique for measuring nip pressure. Direct measurement of the ink stripe was an annoying, messy, inaccurate and unscientific process.

SIGMA-NIP® TECHNOLOGY

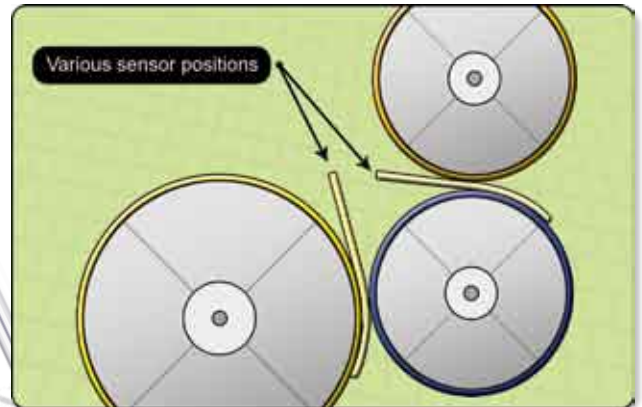
Through the application of sophisticated mathematical algorithms, Sigma-Nip® is able to discern the pressure distribution between nip rolls with a high degree of accuracy never before attainable. Each sensor is individually calibrated, serialized and carefully assembled to exacting tolerances. The sensor is designed to repeatedly withstand high pressures, conform to radiused surfaces and routine exposure to grease, liquids and inks.

SENSOR SPECIFICATIONS

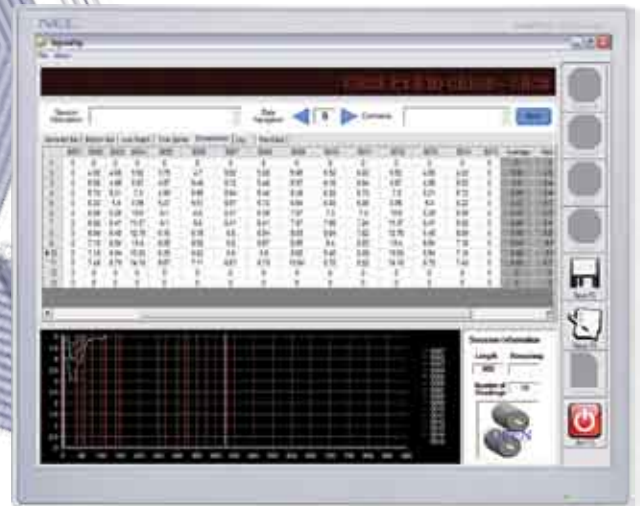
Technology	Resistive
Active Sensor Area	9 in (22.9 cm)
Sensor Thickness	10 mils (0.254 mm)
Temp. Range	0°F to 104°F (-17.7°C to 40°C)
Resolution	0.05 in (0.13 cm)
Nip Width Range	0.05 in to 9 in (0.13 cm to 22.9 cm)
Min. Pressure	40 PSI (2.8 kg/cm ²)
Max. Pressure	3,000 PSI (211 kg/cm ²)
Cycle Speed	1 FPS
Accuracy	± 6%
Repeatability	± 98%
Weight per Element	1.5 oz (42.6 gr)



Close up view of single sensor element



Sigma-Nip® can be positioned at any nip point within the printing unit section. The above illustration shows two potential nips / positions.



Highly detailed information about your nip condition